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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DINH, KHANH Q

ART UNIT	PAPER NUMBER
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2151

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 08/841,397	Applicant(s) MATSUOKA, SHINYA	
	Examiner Khanh Dinh	Art Unit 2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2004.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3- 9, 11-18, 20-25 and 45-48 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1, 3- 9, 11-18, 20-25 and 45-48 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is in response to the Amendment filed on 5/6/2004. Claims 1, 3- 9, 11-18, 20-25 and 45-48 are presented for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 7, 9, 17, 18, 24, 45-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding the claims, the term "may" renders the claim indefinite because it is unclear whether the limitation indicates "may" or "may not".

Claim Rejections - 35 USC ' 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-5, 7, 9, 11, 12, 13, 18, 20, 21, 24, 45, 47 and 48 are rejected under 35 U. S. C. 103(a) as being unpatentable over Bruno et al U.S. pat. No. 5,710,591 in view of Cohen et al, IEEE 1993, "Virtual gain for audio windows."

As to claim 1, Bruno discloses an audio conference sever (ACS) for enabling an application program to provide multi-point (22a, 22b, 22c fig. I) comprising:

- means for managing at least one audio conference, said at least one audio conference comprising a plurality of audio clients (12a, 12b, 12c fig. I).
- - means for receiving (MCU 26 fig. I) audio data from said plurality of audio clients (see fig. I and col.I lines 29-51).

Bruno does not specifically disclose the mixer for audio data, providing distance-based attenuation according to sound decay characteristics, at least one sound characteristic being assigned to each audio client from a plurality of different sound decay characteristics, each different sound decay characteristic providing a different volume/distance relationship, wherein said sound decay characteristic may take into account decay characteristics according to a sound's behavior.

However, Cohen discloses means for mixing said audio data to provide spatialized audio to said plurality of audio clients in said at least one audio conference, wherein said fixing means results in mixed audio data (see Cohen's audio mixers, see page 85, section 0.1), and means for delivering said mixed audio data to said plurality of audio clients in said at least one audio conference (transferring data to multiple audio resources, see page 85, section 0.1) and a mixing means for providing distance-based attenuation according to sound decay characteristics, at least one sound characteristic being assigned to each audio client from a plurality of different sound decay characteristics, each different sound decay characteristic providing a different volume/distance relationship,

[i.e., the distance -dependent gain parameter used in MAW (moving source/moving sink) and listeners can alter these different parameters among the teleconferees, see Cohen's section 1.2, distance dependent-gain and fig.3, pages 85-88], wherein said sound decay characteristic may take into account decay characteristics according to a sound's behavior (Virtual gain is calculated by the effects of the distance between source and sink. In this case, Cohen discloses using sound sources as points reflect changes to the Virtual gains, see pages 87-88). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Cohen's audio data mixer in Bruno's audio conference server to control the volume of a sound source and a listener because it would have allowed multiple simultaneous audio sources to coexist in a modifiable display without user stress (see Cohen's section 0.1).

As to claim 3, Bruno teaches checking the status of a registered owner of said at least one audio conference to determine whether said at least one audio conference still exists (detecting the location of a signal to identify at least one terminal device, see abstract and col.12 lines 20-52).

As to claim 4, Bruno further discloses checking means including a resource audit service (multiple control unit MCU 26 of fig. 1), said resource audit service operable when said at least one audio conference is generated by a first application and is being used by a second application (a presentation mode can be seen by other conferees, see abstract and col. 4 line 54- col.5 line 40).

As to claim 5, Bruno further discloses a plurality of audio clients includes set top box (STB) audio clients and point source audio (PSA) audio clients (audio sources and the participants of the teleconference, see col.7 lines 27-64).

As to claim 7, Cohen discloses means for determining distance between a target audio client and a plurality of source audio clients, means for determining a plurality of weight values for each of said source audio clients based on an identified decay factor (distance-dependent gain parameter used in MAW, see Cohen's section 1.2) and a distance between each of said source audio client and a target audio client, wherein each of said weight values corresponds to a source/client pair (see Cohen's section 1.2, fig.3), means for generating a mix table (mixing board, see Cohen's section 0.1) for each source/client pair and means for calculating an actual mix (calculating parameters, see Cohen's section 0.1).

Cohen further discloses a continued gradual decay characteristics (see Cohen's fig.3). Therefore, Cohen inherently discloses an audio big decay factor, an audio small decay factor, an audio medium decay factor and a constant decay factor. Cohen further discloses said sound decay characteristic may take into account decay characteristics according to a sound's behavior (Virtual gain is calculated by the effects of the distance between source and sink. In this case, Cohen discloses using sound sources as points reflect changes to the Virtual gains, see pages 87-88). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Cohen's

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audio data mixer in Bruno's audio conference server to control the volume of a sound source and a listener because it would have allowed multiple simultaneous audio sources to coexist in a modifiable display without user stress (see Cohen's section 0.1).

Claims 9 and 18 are rejected for the same reasons set forth above for claim 1.

Claim 11 is rejected for the same reasons set forth above for claim 3.

Claims 13 and 22 are rejected for the same reasons set forth above for claim 5.

Claims 12 and 21 are rejected for the same reasons set forth above for claim 4.

Claims 20 and 24 are rejected for the same reasons set forth above for claims 3 and 7.

Claim 45 is rejected for the same reasons set forth above for claim 1.

Claim 47 is rejected for the same reasons set forth above for claim 18.

Claim 48 is rejected for the same reasons set forth above for claims 1 and 18.

6. Claims 6, 14-16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun and Cohen as applied to claim 1 above, and further in view of Chau et al U. S. Pat. No.5,764,750.

As to claim 6, Braun and Cohen's teachings still applied as in item 4 above, but neither Braun nor Cohen discloses a providing program access to high level methods for creating and managing a proxy audio conference. However, Chan et al disclose a providing program access to high level methods for creating and managing a proxy audio conference (see abstract, fig.2 and col.5 lines 1-col.6 lines 35). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to

utilize Chau et al's proxy server in Braun's audio conference server because it would have provided the capabilities required of endpoints by the local system and its protocol in order to allow the local and the, remote endpoints to communicate with each other (see Chau's summary).

As to claims 14, 15, 16 and 23, it is similar in scope as that of claim 6, and therefore is rejected for the same reasons set forth above for claim 6.

7. Claims 8, 17, 25 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruno et al U.S. pat. No. 5,710,591 and Cohen as in claims 1 and 7 above and further in view of Everett US pat. No.5,864,816.

As to claim 8, Braun and Cohen's teachings still applied as in item 4 above. Neither Braun nor Cohen discloses a fade in/fade out function (scale factors) to avoid the delivery of said data in a step-wise manner to a speaker output (see abstract, col.1 line 57 to col.2 line 22). However, Everett discloses: A floating point operation elimination function (see 40 of fig.2) to avoid the performance of floating point multiplication (identifying scale factor functions to determine the excess of a predetermined threshold, see col.2 lines 30-63, col.4 lines 10-54). A stream data function to prepare stream audio (MPEG streams) for playing ambient background music or using an audio source forwarded from another conference (see fig. 1, col.3 lines 20-65). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to

Everett's teachings into Braun's audio system to facilitate the mixings of data streams because it would have facilitated the mixings of audio data in compressed forms.

As to claim 17, it is similar in scope as that of claims 7 and 8, and therefore is rejected for the same reasons set forth above for claims 7 and 8.

As to claim 25, it is similar in scope as that of claim 8, and therefore is rejected for the same reasons set forth above for claim 8.

Claim 46 is rejected for the same reasons set forth above for claims 1 and 17.

Response to Arguments

8. Applicant's arguments filed on 5/6/2004 have been fully considered but they are not persuasive.

* Applicant asserts that the cited reference does not disclose sound decay characteristic may take into account decay characteristics according to a sound's behavior

Examiner respectfully disagrees. Cohen discloses that the sound decay characteristic may take into account decay characteristics according to a sound's behavior (Virtual gain is calculated by the effects of the distance between source and sink. As a result, Cohen discloses using sound sources as points reflect changes to the Virtual gains, see pages 87-88) as rejected above.

Conclusion

9. Claims 1, 3- 9, 11-18, 20-25 and 45-48 are rejected.
10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Dinh whose telephone number is (571) 272-3936. The examiner can normally be reached on Monday through Friday from 8:00 A.m. to 5:00 P.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung, can be reached on (571) 272-3939. The fax phone number for this group is (703) 872-9306.

*A shortened statutory period for reply is set to expire **THREE months** from the mailing date of this communication. Failure to response within the period for response*

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will cause the application to become abandoned (35 U. S. C . Sect.133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(A).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval IPAIRI system. Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ZARNI MAUNG
SUPERVISORY PATENT EXAMINER

Khanh Dinh
Patent Examiner
Art Unit 2151
4/15/2005